

Attorney Docket No. 1985/US/2
USPTO Facsimile No. (571) 273-8300

Amendments to the Claims:

1. (Currently Amended) A hand held oral irrigation device for irrigating an oral cavity with a fluid, the device comprising:

a reservoir for storing the fluid;
a body; and
an elongated nozzle[,]; wherein

the reservoir comprises:

a shelf portion defined about a bottom portion of the reservoir; and

a base at a bottom end of the reservoir;

a fluid access valve fluidly coupling with said inlet conduit, the fluid access valve comprising:

a channel defined within the reservoir extending from the shelf to the base, said channel receiving an inlet conduit;

a seal positioned about a top end of the channel;

a spring extending upwardly from the base within the reservoir; and

a ball positioned within the channel between said seal and said spring;

and

a reservoir inlet conduit positioned along the base of the reservoir, the reservoir inlet conduit fluidly coupled with the channel, so that fluid is drawn from the bottom of the reservoir;

wherein the reservoir defines a first major diameter at a lower end of the oral irrigation device and the body and reservoir combine to define a second major diameter at an upper end of the oral irrigation device, the first major diameter being larger than the second major diameter.

2. (Previously Presented) The device of claim 1, wherein the body further comprises a motor, a pump, and a drive mechanism coupling the motor to the pump, said pump for controllably delivering the fluid from the reservoir to the nozzle.

3. (Previously Presented) The device of claim 2, further comprising:
a three-way control structure having a first button for activating the motor, a second button for de-activating the motor, and a third button for releasing the nozzle from the body.

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4. (Original) The device of claim 2, wherein the drive mechanism includes a pump gear coupled with said motor, wherein the pump gear includes an eccentric offset disc extending from said pump gear.
5. (Original) The device of claim 4, wherein the drive mechanism further comprises:
a connecting rod coupled with the eccentric offset disc.
6. (Original) The device of claim 5, wherein the connecting rod further comprises:
a hollow cylindrical portion receiving the eccentric offset disc of the pump gear;
an arm extending from the cylindrical portion; and
a ball end positioned at the end of said arm.
7. (Previously Presented) The device of claim 6, wherein the pump includes:
a pump head having an inlet fluid port, an outlet fluid port, and an interior fluid channel in fluid communications with said inlet and outlet fluid ports;
a pump body defining a cylindrical chamber in fluid communications with said interior fluid channel of said pump head; and
a piston having a bottom portion and a top portion, the bottom portion receiving at one end the ball end of the connecting rod, said piston positioned within said cylindrical chamber of the pump body;
wherein the inlet fluid port is fluidly coupled with the reservoir, and the outlet fluid port is fluidly coupled with the tip.
8. (Original) The device of claim 7, wherein the top portion of the piston includes:
an annular flange;
an interior pedestal; and
an annular recess defined between the annular flange and the interior pedestal.
9. (Original) The device of claim 7, wherein the pump further comprises:
an inlet fluid valve regulating fluid flow into said inlet fluid port; and
an outlet fluid valve regulating fluid flow into said outlet fluid port.
10. (Original) The device of claim 9, wherein when the piston is moved downwardly within the cylindrical chamber of the pump body, the inlet fluid valve is open, the outlet fluid valve is closed, and fluid is drawn from the inlet port into the cylindrical chamber of the pump body.

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11. (Original) The device of claim 9, wherein when the piston is moved upwardly within the cylindrical chamber of the pump body, the inlet fluid valve is closed, the outlet fluid valve is open, and fluid is expelled from the cylindrical chamber of the pump body to the outlet fluid valve for delivery to the tip.
12. (Original) The device of claim 9, wherein the inlet fluid valve includes a first reed valve made of flexible fabric material.
13. (Original) The device of claim 9, wherein the outlet fluid valve includes a second reed valve made of flexible fabric material.
14. (Original) The device of claim 10, wherein the first reed valve includes:
 - a rim defined on a portion of a perimeter of the first reed valve;
 - a hinge portion; and
 - a flap portion interior to the rim, a first end of said flap portion attached to the hinge portion, said flap positioned relative to the rim so as to define a crescent shaped opening.
15. (Previously Presented) The device of claim 14, wherein the flap portion has a diameter, and wherein the interior fluid channel of the pump head has a diameter, the diameter of the flap portion being larger than the diameter of the interior fluid channel.
16. (Original) The device of claim 1, wherein the reservoir is detachable from the body.
17. (Original) The device of claim 1, wherein the reservoir has a top portion and a bottom portion, the top portion having a first cross section, the bottom portion having a second cross section, the second cross section being larger than the first cross section.
18. (Original) The device of claim 1, wherein the reservoir further comprises:
 - an opening positioned at a top end; and
 - a lid releasably secured about said opening.
19. (Currently Amended) The device of claim 7, wherein the body further comprises:
 - [[an]] the inlet conduit fluidly coupling said reservoir with said inlet fluid port; and
 - an outlet conduit fluidly coupling said outlet fluid port with said tip.

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20. (Currently Amended) The device of claim 7, wherein the body further comprises ~~[[an]] the~~ inlet conduit fluidly coupling said reservoir with said inlet fluid port, ~~and wherein the reservoir further comprises a fluid access valve fluidly coupling with said inlet conduit.~~

21. (Canceled)

22. (Original) The device of claim 9, wherein the inlet fluid valve of the pump is vertically positioned within the body at a location lower than a full level of fluid in the reservoir, thereby self priming the pump with said fluid.

23. (Previously Presented) The device of claim 1, wherein the nozzle further comprises an annular groove; and wherein the body further comprises:

- a nozzle holding structure having a cylindrical wall defining a cylindrical opening;
 - a slot defined within said cylindrical wall;
 - a clip having an interior lip, said interior lip positioned within said slot and extending into said cylindrical opening; and
 - a spring for biasing the lip of the clip into the slot;
- wherein when the spring is uncompressed, the lip is received within the annular groove of the nozzle to secure the nozzle to the body.

24. (Original) The device of claim 1, wherein the reservoir has a capacity of approximately 120 to 200 ml of fluid.

25. (Original) The device of claim 2, wherein the body includes a wall structure defining a first and second section within the body, the first section containing the pump, and the second section contains the motor and the drive mechanism, wherein the first and second sections are fluidly isolated.

26-34. (Canceled)